



THE AMERICAN ASSOCIATION FOR  
LABORATORY ACCREDITATION

## ACCREDITED LABORATORY

A2LA has accredited

**VACUUM TECHNOLOGY, INC.**  
**Oak Ridge, TN**

for technical competence in the field of **Calibration**

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 *General Requirements for the Competence of Testing and Calibration Laboratories*. This laboratory also meets the requirements of ANSI/NCSL Z540-1-1994 and any additional program requirements in the field of calibration. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (*refer to joint ISO-ILAC-IAF Communiqué dated 18 June 2005*).

Presented this 29<sup>th</sup> day of January 2009.

A handwritten signature in cursive script, reading "Peter Meyer", written over a horizontal line.

President

For the Accreditation Council

Certificate Number: 1707.01

Valid to: February 28, 2011



For the calibrations to which this accreditation applies, please refer to the laboratory's Calibration Scope of Accreditation.

SCOPE OF ACCREDITATION TO ISO/IEC 17025:2005  
& ANSI/NCSL Z540-1-1994

VACUUM TECHNOLOGY, INC.  
 1003 Alvin Weinberg Drive  
 Oak Ridge, TN 37830  
 Rod Taylor Phone: 865 481 3342

CALIBRATION

Valid To: February 28, 2011

Certificate Number: 1707.01

In recognition of the successful completion of the A2LA evaluation process, accreditation is granted to this laboratory to perform the following calibrations<sup>1</sup>:

I. Fluid Quantities

Parameter/Equipment	Range (atm·cm <sup>3</sup> /s)	Best Uncertainty <sup>2</sup> (±)	Comments
Gas Flow Rate –  All gases	(1×10 <sup>-9</sup> to 3×10 <sup>-5</sup> )	4.5 % of reading	Primary calibration system
	(1×10 <sup>-6</sup> to 100)	5 % of reading	Large leak calibration system
	(1×10 <sup>-10</sup> to 1×10 <sup>-4</sup> )	5 % of reading	Automated mass spectrometer comparison calibration system
Helium and Hydrogen only	(1×10 <sup>-5</sup> to 1×10 <sup>-1</sup> )	10 % of reading	Sniffer leak detector
	(1×10 <sup>-10</sup> to 1×10 <sup>-3</sup> )	12 % of reading	Manual mass spectrometer comparison calibration system
Nitrogen only	(1×10 <sup>-9</sup> to 3×10 <sup>-5</sup> )	3.5 % of reading	Primary calibration system

Parameter/Equipment	Range	Best Uncertainty <sup>2</sup> (±)	Comments
Vacuum Gauges –  All Gases	1×10 <sup>-3</sup> torr to 3000 psig	2.5 % of reading	VGMS w/ capacitance manometer static comparison
	(1×10 <sup>-7</sup> to 1×10 <sup>-3</sup> ) torr	5 % of reading	VGMS w/ spinning rotor gauge dynamic comparison

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<sup>1</sup> This laboratory offers commercial calibration service.

<sup>2</sup> “Best Uncertainty” is the smallest uncertainty of measurement that a laboratory can achieve within its scope of accreditation when performing more or less routine calibrations of nearly ideal measurement standards of nearly ideal measuring equipment. Best uncertainties represent expanded uncertainties expressed at approximately the 95 % level of confidence, usually using a coverage factor of  $k = 2$ . The best uncertainty of a specific calibration performed by the laboratory may be greater than the best uncertainty due to the behavior of the customer’s device and to influences from the circumstances of the specific calibration.